

Name: Answer Key

Date: \_\_\_\_\_

Period: \_\_\_\_\_

## Ch. 3 Practice Test Inequalities

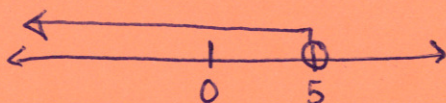
Directions: Solve and graph each inequality.

1.  $3x + 4 < 19$

$$\begin{array}{r} -4 \quad -4 \\ 3x < 15 \end{array}$$

$$3x < 15$$

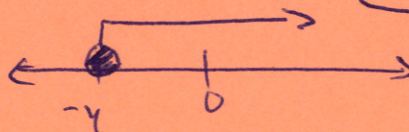
$$\boxed{x < 5}$$



2.  $\frac{5-4p}{7} \leq 3 \rightarrow 5-4p \leq 21$

$$-4p \leq 16$$

$$\boxed{p \geq -4}$$



3.  $\frac{4(1-p)}{4} \geq \frac{4(2+p)}{4}$

$$\begin{array}{r} 1-p \geq 2+p \\ +p \quad +p \end{array}$$

$$\begin{array}{r} 1 \geq 2+2p \\ -2 \quad -2 \end{array}$$

$$-1 \geq 2p$$

$$\boxed{p \leq -\frac{1}{2}}$$



4.  $\frac{2(1-x)}{2} > \frac{-2(1+x)}{2}$

$$1-x > -1(1+x)$$

$$\begin{array}{r} 1-x > -1-x \\ +x \quad +x \\ 1 > -1 \end{array}$$

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5.  $3(c+1) > 3c+5$

$$\begin{array}{r} 3c+3 > 3c+5 \\ -3c \quad -3c \end{array}$$

$$3 > 5$$

NO  
Solution

6.  $8-5(x+3)-2x \geq -4x-7(x+1)$

$$8-5x-15-2x \geq -4x-7x-7$$

$$\begin{array}{r} -7-7x \geq -11x-7 \\ +7 \quad +7 \end{array}$$

$$\begin{array}{r} -7x \geq -11x \\ +11x \quad +11x \end{array}$$

$$\frac{4x}{4} \geq \frac{0}{4}$$

$$\boxed{x \geq 0}$$





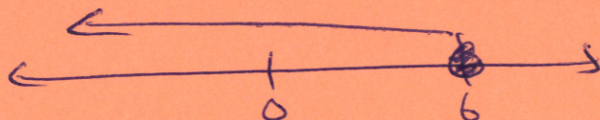
$$7. 4(x-5) + 2(x+7) \leq 3x + 12$$

$$4x - 20 + 2x + 14 \leq 3x + 12$$

$$\begin{array}{r} 6x - 6 \leq 3x + 12 \\ -3x + 6 \quad -3x + 6 \\ \hline \end{array}$$

$$3x \leq 18$$

$$\boxed{x \leq 6}$$



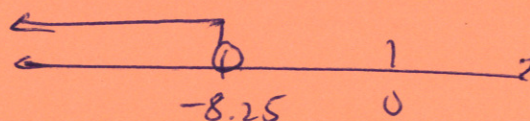
$$8. \left( \frac{1}{2}x + \frac{3}{4} < \frac{1}{6}(x-12) \right) 12$$

$$6x + 9 < 2(x-12)$$

$$\begin{array}{r} 6x + 9 < 2x - 24 \\ -2x - 9 \quad -2x - 9 \\ \hline \end{array}$$

$$4x < -33$$

$$\boxed{x < -8.25}$$

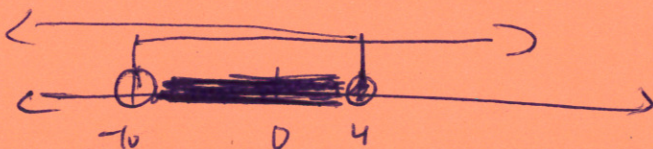


Directions: Solve and graph each compound inequality.

$$9. -4 < t + 6 \leq 10$$

$$\begin{array}{r} -6 \quad -6 \quad -6 \\ \hline \end{array}$$

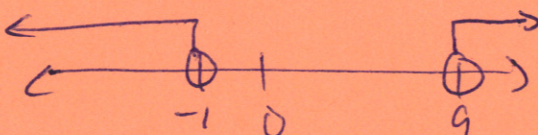
$$-10 < t \leq 4$$



$$10. n - 4 > 5 \text{ AND } 2 > n + 3$$

$$\begin{array}{r} +4 \quad +4 \quad -3 \quad -3 \\ \hline \end{array}$$

$$n > 9 \text{ AND } -1 > n$$

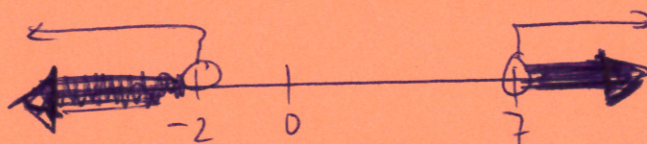


**No Solution**

$$11. -3 + r > 4 \text{ OR } r + 1 < -1$$

$$\begin{array}{r} +3 \quad +3 \\ \hline \end{array}$$

$$r > 7 \text{ OR } r < -2$$





$$12. p+8 > 6 \text{ AND } 12 \geq p+7$$

$$-8 - 8 \quad -7 \quad -7$$

$$p > -2 \quad 5 \geq p$$

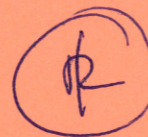
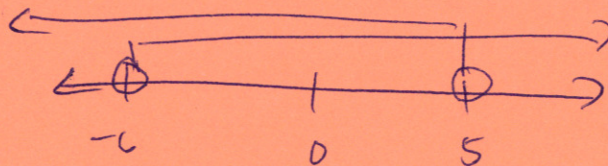


$$13. 3 < s+9 \text{ OR } 1 > s-4$$

$$-9 - 9 \quad -4 \quad -4$$

$$\text{Erase } 5 > s$$

$$-6 < s$$



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